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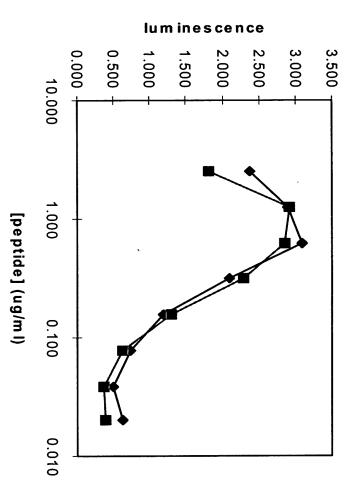
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SEQ OES OES OES OES 5555555 HH NO:15 NO:16 NO:17 NO:12 NO:13 NO:14 NO:10 NO: 1 NO: 2 NO: 3 NO: 4 NO: 5 NO: 6 NO: 7 NO: 24 NO: 25 NO: 26 NO: 27 NO: 28 NO: 29 NO: 30 NO:20 NO:21 NO:22 NO:23 NO:18 NO:19 NO: ဖ 1 RLLALETLIQNQQLLNLWGCKGRIVCYTSVRWN
1 RLLALETLIQNQQLLNLWGCKGKIVCYTSVRWN
1 RLLALETLIQNQQLLNLWGCKGKLICYTSVRWN
1 RLQALETLIQNQQLLNLWGCKGRIICYTSVRWN
1 RLLALETFIQNQQLLNLWGCKGRIICYTSVKWN
1 RLLALETLIQNQQLLNLWGCKGRLICYTSVKWN
1 RLLALETLIQNQQLLNLWGCKGRLVCYTSVKWN
1 RLLALETLIQNQQLLNLWGCKGRIVCYTSVKWN
1 RLLALETLIQNQQLLNLWGCKGRIVCYTSVKWN
1 RLLALETLIQNQQLLNLWGCKGRLVCYTSVKWN
1 RLLALETLIQNQQLLNLWGCKGRLVCYTSVKWN
1 RLLALETLIQNQQLLNLWGCKGRLICYTSVKWN
1 RLLALETLIQNQQLLNLWGCKGRLICYTSVKWN
1 RLLALETFIQNQQLLNLWGCKGRLICYTSVKWN
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1 RLQALETLIQNQQLLNLWGCKGRLICYTSVKWN
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1 RLQALETLIQNQQLLNLWGCKGRLICYTSVKWN
1 RLQALETLIQNQQLLNLWGCKGRLICYTSVKWN
1 RLQALETLIQNQQLLNLWGCKGRLICYTSVKWN RLLALETLIQNQQLLNSWGCKGRQVCYTSVKWN RLLALETLIQNQQLLNLWGCKGRLICYTSVKWN RLLALETLMQNQQLLNLWGCKGRILCYTSVKWN RLLALETLIÕNÕÕLLNIWGCKGRLICYTSVKWN RLLALETFIONÕÕLLNIWGCKGQLVCYTSVKWN RLLALETFIONÕÕLLNIWGCKGRIICYTSVKWN RLLALETLIÕNÕÕLLNSWGCKGRIVCYTSVKWN RLQALEPLIQNQQRLSLWGCKGRIICYTSAKWN RLLALETLIQNQQLLNSWGCKGRLVCYTSVKWN RLLALETLIQNQQLLNLWGCKGRLICYTSVEWN RLLALETLIQNQQLLNSWGCKGRLVCYTSVEWN RLLALETLIQNQQLLSLWGCKGKLICYTSVKWN RLQALETLIQNQQRLNLWGCKGKLICYTSVKWN RIVALETIVONQOLINIWGCKGRITCYTSVKWN RLLALETFIQNQQLLNLWGCKNRLICYTSVKWN LLALETLIQNQQLLNLWGCKGRLVCYTSVKWN LWGCKGKLVCYTSVKWN

Figure 1. Alignment of HIV-1 group O immunodominant region amino acid sequences

ABT1123 ABT124 ABT2156 CDC1897 CDC7755 1516 193Ha 686 1515 BCF1 BCF13 BCF09 DUR POC FAN VAU **ABT063** BCF12 MVP5180 Majority D47-2d ANT70 +Majority Nr42 PE41 ESS NKO NAN MAN HOB HCYT2c HLD28



peptide 147

peptide 80

Figure 2. Recognition of peptides 147 and 80 by an HIV-1 group O sample.

ascending helix

514 AAIGALFLGFLGAAGSTMGAASVTLTVQARLLL\$GIVQQQNNLLRAIEAQQHMLQLTVWGIKQLQARVLAVERYLKDQQL

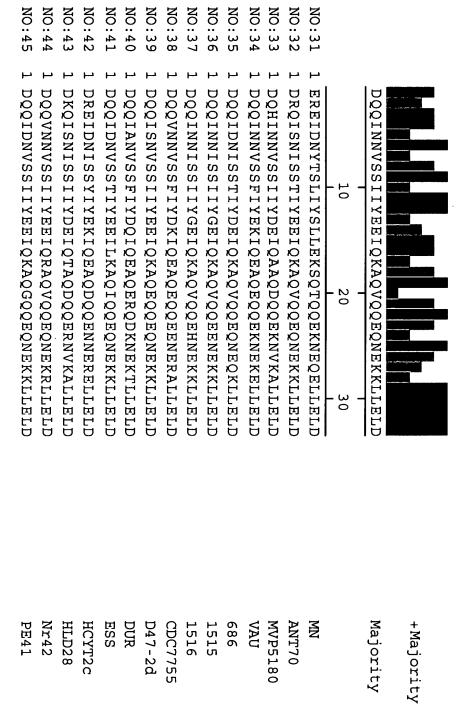
immunodominant region

Figure 3. Ectodomain of gp41 (MN isolate)

descending helix

LGFWGCSGKLICTTTVPWNASWSNKSLDDIWNNMTWMQWEREIDNYTSLIYSLLEKSQTQQEKNEQELLELDKWJSLWNW

673



OES OES OES

U U U

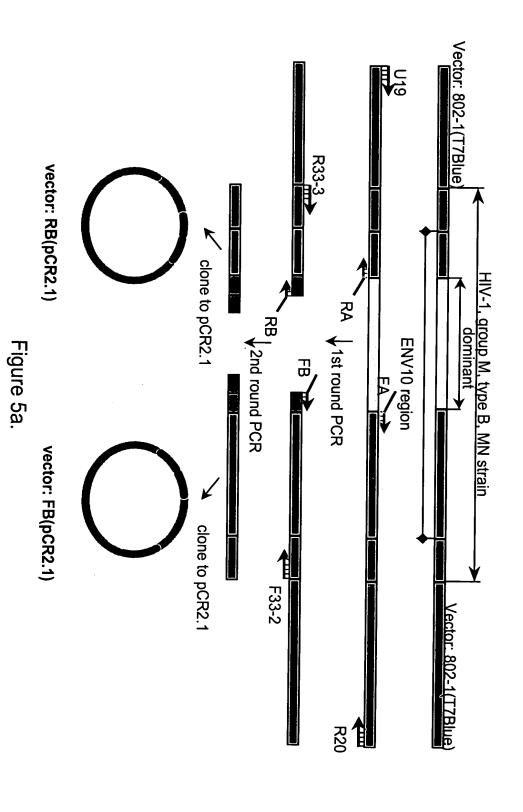
U U U

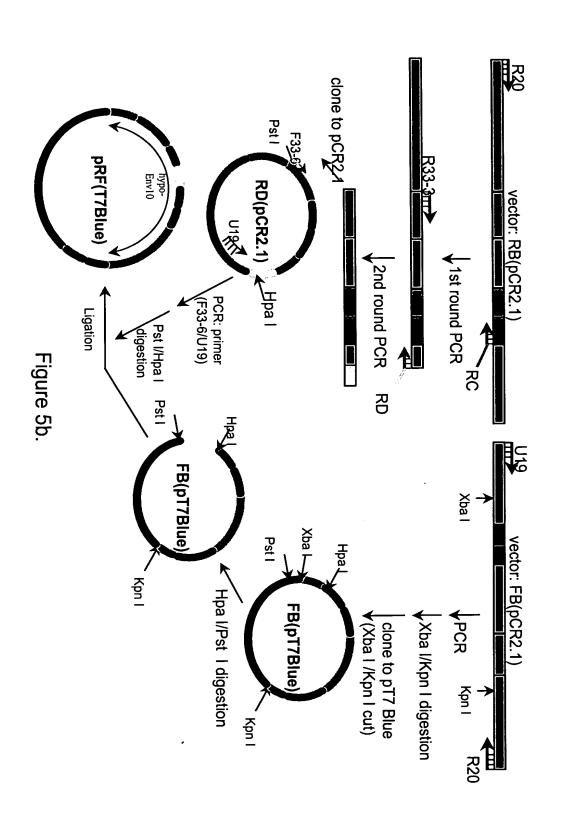
SEQ

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Figure 4. Alignment of MN (type B) and group O gp41 sequences in the region of the descending helix





Primers used in the experiment:

SEQ ID NO:56 F33-6:	SEQ ID NO:55 F33-2:	SEQ ID NO:54 R33-3:	SEQ ID NO:53 R20:	SEQ ID NO:52 U19:	SEQ ID NO:51 RD:	SEQ ID NO:50 RC:	SEQ ID NO:49 RB:	SEQ ID NO:48 RA:	SEQ ID NO:47 FB:	SEQ ID NO:46 FA:
F33-6:5'-GCCACTGCAGCCAGACTATTATTGTC	F33-2:5'-CATAAAGCTTGTCCCAGAAGTTCC	R33-3:5'-ACCGGAATTCCGATTTCCTTGGGTT	5'-CAGCTATGACCATGATTACG	5'-GTTTTCCCAGTCACGACGT	5'-ACATTGTTAACTTGCTGGTCCCATTGCATCCAGGTCATGTTATCCCAGATATCCTCCAGAGA	5'-CCAGATATCCTCCAGAGACTTATTAGACCAAGAAGCATGCCAACGGGCACTAGTATAACAAA	5'-GGGCACTAGTATAACAAATAATACGACCCTTACAACCCCAAGAATTCAGACGCTGT	5'-CAAGAATTCAGACGCTGTTGGTTTTGCATCAGAGTCTCCAGAGCCTGTAGGCGAGCTCGGAGCTG	5'-AGCAAGTTAACAATGTTTCTTCTATTATTATGATAAGATTTTGGAAGCCCAGGATCA	5'-ATTTTGGAAGCCCAGGATCAACAAGAGGAGAACGTTCGTGAGTTGCTGGAGCTAGATAAATGG

Figure 5d. Nucleotide sequences of the primers used in Figures a - c.

SEQ ID NO:57

DHFR

MRGSGIMVRPLNSIVAVSQNMGIGKNGDLPWPPLRNEFKYFQRMTTTSSVEGKQNLVIMGRKTWFSIPEKNRPLKDRINI

VLSRELKEPPRGAHFLAKSLDDALRLIEQPELASKVDMVWIVGGSSVYQEAMNQPGHLRLFVTRIMQEFESDTFFPEIDL

GKYKLLPEYPGVLSEVQEEKGIKYKFEVYEKKGSRSARLLLSGIVQQQNNLLRAIEAQQHMLQLTAWGIKQLRARLQA<u>LE</u>

TLMQNQQRLNSWGCKGRIICYTSARWHASWSNKSLEDIWDNMTWMQWDQQVNNVSSIIYDKILEAQDQQEENVRELLELD

KWASLWNWFDITNWLWYIKIFIMIVGGLVGLRIVFAVLSIVNRVRQGYSPLSLQTRPPVPRGPDRPEGIEEEGGERDRDT

SGRIVHGFLAIIWVDLG

) (His) ₆

Figure 6a. Amino acid sequence of DHFR-hENV-MH

DHFR

<u> TNOTADATARINGE GENERATENTANING METERBERKAN TARINGEN BILANING METERBERGENGEN GENERAL GENERAL GENERAL GENERAL G</u>

<u>SOOMYTUNNINGWYSATIEGOETTTBYTGOOTISYGYTTIGGGAAGGEOYTIEGISY</u>

TLMQNQQRLNSWGCKGRIICYTSARWHASWSNKSLEDIWDNMTWMQWDQQVNNVSSIIYDKILEAQDQQEENVRELLELD ©KXKKULLPEYPGVLSEVQEEKGIKXKFEVYEKKGSRSARULLSGIVQQQNNLLRAIEAQQHMLQLTAWGIKQLRARLQALE

group O KWASLWNWFDITNWLWYIKIFIMIVGPEOKLISEEDUNSAWDHHHHHH

group O

(His)₆

myc

Figure 6b. Sequence of DHFR-hES-MH